

Supplementary Material



Comparison of Meteorological and Agriculture Related Drought Indicators across Ethiopia

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Droughts corresponding to each drought indicator were ascertained from the binary time-series. The drought duration and severity corresponding to each drought event as well as the duration between two consecutive drought events were calculated. The Cunnane plotting position was used to develop empirical cumulative distribution functions for each indicator and at each time-scale for each drought characteristic. The empirical cumulative distribution functions were used to compute the median (50^{th} percentile), the Inter-Quartile Range (IQR) which then were used to compute the Robust Coefficient of Variation (RCV = $0.75 \times IQR/Median$). The plots for these parameters are shown below.



Figure S1. Median (50th percentile) for drought severity across Ethiopia for SPI, SPEI and PDSI (Z-index) at intra-seasonal and seasonal time-scal.



Figure S2. InterQuartile Range (IQR) for drought severity across Ethiopia for SPI, SPEI and PDSI (Z-index) at intra-seasonal and seasonal time-scales.





Figure S3. Robust Coefficient of Variation (RCV) for drought severity across Ethiopia for SPI, SPEI and PDSI (Z-index) at intra-seasonal and seasonal time-scales.





Figure S4. Median (50th percentile) for drought duration across Ethiopia for SPI, SPEI and PDSI (Z-index) at intra-seasonal and seasonal time-scales.





Figure S5. InterQuartile Range (IQR) for drought duration across Ethiopia for SPI, SPEI and PDSI (Z-index) at intra-seasonal and seasonal time-scales.



Figure S6. Robust Coefficient of Variation (RCV) for drought duration across Ethiopia for SPI, SPEI and PDSI (Z-index) at intra-seasonal and seasonal time-scales.

RCV

< 1.0

1.0 - 1.25

1.25 - 1.50

1.50 - 2.0

RCV

< 1.0

1.0 - 1.25

1.25 - 1.50

1.50 - 2.0

2.0 - 5.97



Figure S7. Median (50th percentile) for inter-drought duration across Ethiopia for SPI, SPEI and PDSI (Z-index) at intra-seasonal and seasonal time-scales.



Figure S8. InterQuartile Range (IQR) for inter-drought duration across Ethiopia for SPI, SPEI and PDSI (Z-index) at intra-seasonal and seasonal time-scales.





Figure S9. Robust Coefficient of Variation (RCV) for inter-drought duration across Ethiopia for SPI, SPEI and PDSI (Z-index) at intra-seasonal and seasonal time-scales.