



Quantification of drought occurrence, severity and duration in some cities in Nigeria

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This paper presents the results of drought study from 25 years daily meteorological data from five different cities located in the major agro-ecological zones of Nigeria. The five cities used for hotspot analyses were Lagos–South West, Bida & Ilorin - North Central, Kaduna - North West and Gwarzo - North East. Parameters evaluated include effective precipitation (EP), means of effective precipitation (MEP), deviation of effective precipitation (DEP) and the standard value of the deviation of effective precipitation (SEP). These parameters were used to derive the effective drought index (EDI) and the accumulation of consecutive negative standard value of the deviation of effective precipitation (ANES) for the five cities. The EDI value less than standard value of 1.0 was used to determine the drought duration. Values obtained for the different cities are 8.67106×10^{-5} for Lagos; 3.8729 for Bida; 8.67106×10^6 for Ilorin; 3.87298 for Kaduna and 0.00015 for Gwarzo. The magnitude of drought from the result in the order severity is Lagos<Ilorin<Bida<Kaduna<Gwarzo. The study highlights the effectiveness of precipitation data in understanding, planning and managing drought events.