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AN ASSESSMENT OF TEMPORAL VARIABILIY OF DROUGHT IN KATSINA USING STANDARDIZED PRECIPITATION INDEX

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ABSTRACT

Drought is a recurrent phenomenon in the Nigeria's arid zone especially in the last few decades. In this study, temporal variation of drought in Katsina from 1922 to 2013 was investigated. Standardized Precipitation Index (SPI) was used to determine the temporal dimensions of drought based on frequency and severity of drought events at 3 and 6-month time steps. The study found that the period of study is cheered by drought and non-drought events. 3-month SPI reveals 48 drought occurrences throughout the period, out of which 4 were severe and 3 were extreme. For the period 1922 to 1970, only 1 extreme drought occurred, but between 1971 and 1998, 4 severe and 2 extreme droughts occurred, while neither severe nor extreme one is recorded from 1999 to 2013. Under this scenario, the severe and extreme drought events have severities of 1 in 23 and 1 in 31 years respectively. 6-month SPI also reveals 48 drought occurrences out of which 3 are severe and 4 are extreme. In this context, only 1 occurrence of extreme drought is recorded from 1922 to 1970, but from 1971 to 1998, 3 severe and 3 extreme droughts are recorded. Under this scenario, severe and extreme droughts have severities of 1 in 30 and 1 in 23 years respectively. It is recommended that even though some sort of respite from drought is being experienced in the area recently, a watchful eye should be kept on drought and coping and mitigation measures always put in place.

KEYWORDS: Drought Severity, SPI, ITCZ

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