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Variability of Climatic Elements in Nigeria Over Recent 100 Years

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Abstract : Climatic variability is an essential issue when dealing with the issue of climate change. Variability of some climate parameter helps to determine how variable the climatic condition of a region will behave. The most important of these climatic variables which help to determine the climatic condition in an area are both the Temperature and Precipitation. This research deals with Longterm climatic variability in Nigeria. Variables examined in this analysis include near-surface temperature, near surface minimum temperature, maximum temperature, relative humidity, vapour pressure, precipitation, wet-day frequency and cloud cover using data ranging between 1901-2010. Analyses were carried out and the following methods were used: - Regression and EOF analysis. Results show that the annual average, minimum and maximum near-surface temperature all gradually increases from 1901 to 2010. And they are in the same case in a wet season and dry season. Minimum near-surface temperature, with its linear trends are significant for annual, wet season and dry season means. However, the diurnal temperature range decreases in the recent 100 years imply that the minimum near-surface temperature has increased more than the maximum. Both precipitation and wet day frequency decline from the analysis, demonstrating that Nigeria has become dryer than before by the way of rainfall. Temperature and precipitation variability has become very high during these periods especially in the Northern areas. Areas which had excessive rainfall were confronted with flooding and other related issues while area that had less precipitation were all confronted with drought. More practical issues will be presented.

Keywords : climate, variability, flooding, excessive rainfall
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