



1 Rainfall characteristic of Niger Republic

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The paper presents a study on the rainfall variability and distribution in Niger republic. Ten-year rainfall record for 13 stations was collected for the investigation. Three methods (i) arithmetic method. (ii) Thiessen polygon and (iii) Isoyetal methods were used to compare the estimation of annual rainfall. Monthly time series curve was plotted for the stations. The result showed a unit-modal rainfall pattern of distribution for the country. The monthly and annual rainfall varied significantly as revealed by the compacted standard deviation and the coefficient of variation. For example 68.5% of the peak monthly rainfall occurred in august

while 25.4% occurred in July and 4.6% in September. The results showed that short duration storms exhibit characteristic similar to those in wide range of climatic regions of the world, and may be useful for agriculture, design of hydraulic and water related structures.

Keywords: rainfall characteristic, variability and distribution, climate and agriculture, hydraulic structures