

Analysis of the Linkages between Evaporation and Precipitation in Imo State of Southeastern Nigeria using Statistical Method

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Atmospheric processes are dynamic with associated feedback mechanism. In other words, weather and climate processes are cyclical in nature. Both evaporation and precipitation are two weather processes which also form parts of basic components of hydrological cycle. Water is received in many parts of the world as precipitation. In many parts of the tropics for instance, the most important source of water is precipitation. Evaporation on the other hands is the reverse of precipitation in a hydrological cycle. It is also a reverse of the incoming radiation from the sun and atmosphere, and consequently an important component not only of water balance but also the energy balance. This study examined the nature of relationship existing between evaporation and precipitation in Imo State, Nigeria employing statistical method. Apparently, its curiosity is on to what extent does evaporation contribute to precipitation in the hydrological cycle? In the research, 20 years (1989-2009) evaporation data and precipitation data for Imo State was obtained and computed using Pearson's product moment correlation coefficient. The results showed a weak relationship between the two climate processes, which indicates an insignificant correlation. Thus, only about 1.83% of precipitation is influenced by evaporation in the study area. However, both components of the water cycle can influence each other irrespective of the level of their influences and they are important atmospheric processes essential for water balance of the earth.