ASSESSMENT OF CLIMATE VARIABILITY IN KENYA AND ITS IMPLICATIONS ON FOOD SECURITY: THE CASE OF KISII COUNTY, KENYA.

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Abstract

Climate variability and change has been singled out to be one of the modern challenges that affect economies of several countries leading to food scarcity and food insecurity in several parts of the world and represent a fundamental contemporary environmental shock. Kenya is no exception. This research was conducted in Kisii County, a perceived national bread basket and investigated the trend in climate variability between the years 1983-2013. The objective was to examine the precipitation and temperature trend in Kisii County. The research question was to find out whether there was any significant trend and pattern of rainfall and temperature as indicators of climate variability. The study examined climate variability for thirty-one years (1983 to 2013). Raw data was obtained from Kenya Meteorological Department and their annual means computed. Mann Kendall statistic test was applied to establish whether the trend of precipitation and temperature observed was significant. From the analysis, rainfall did not show any significant trend in Kisii County whilst temperature revealed a significantly upward trend over the years, at 95% confidence level. There is need to incorporate weather prediction and early warning systems by the Ministry of Agriculture and promote afforestation programmes. To build resilient systems to climate shocks, introduction of high temperature tolerant food crops as well as adoption of climate smart agriculture should be explored. **Key words:** Climate variability, Kisii County, food security, climate shocks, climate smart agriculture, SDG 1, SDG 2