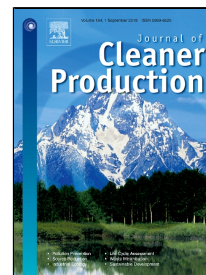


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## **Between rainfall and food poverty: Assessing vulnerability to climate change in an agricultural economy**

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### **Abstract**

The agricultural sector in Nigeria provides a socio-economic resource base for exiting pervasive poverty, and transforming the economy. However, with the challenges posed by climate change through variability in rainfall, the agricultural livelihoods and poverty status of the population could be threatened due to the vulnerability context of the country. This paper explores the relationship between rainfall and food poverty through the assessment of vulnerability to climate change in an agricultural economy by geo-referencing and mapping of rainfall variability and food poverty. It provides a quantification of the scale and location of the area under food poverty and rainfall variability with scenarios that provide alternative sustainable development pathways of desirable outcomes. The coefficients of variation of rainfall or precipitation seasonality were computed from geo-referenced data and topologically overlaid on the most recent food poverty profile for Nigeria. The findings reveal intriguing phenomena bordering on agro-climatic and socio-economic factors of climate change vulnerability. The findings provide a basis for policy formulation and implementation on inequity of food poverty and environmental sustainability. It offers empirical insights on how to rethink concepts of socio-economic and environmental sustainability through landscapes and livelihoods as outcomes of vulnerability contexts. The paper concludes that, there is need for agricultural transformation along vulnerability dimensions. The evidence of the nexus between rainfall and food poverty could be a new model for promoting sustainability of the agrarian economy in Nigeria.

**Keywords:** Rainfall variability, Food poverty, Geographical information systems, Adaptation policy.

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