Sustainable Land Management Practices in Combating Desertification within the Sahel Region of Ghana

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Abstract

The Sahel region of Ghana is facing significant desertification challenges due to climate change and unsustainable land management practices. A comprehensive search strategy was employed to identify relevant literature from databases such as Web of Science, Scopus, and Google Scholar. Studies were screened based on predefined inclusion criteria related to SLM practices and desertification in the Sahel region. The review identified a substantial proportion (75%) of studies highlighting the effectiveness of intercropping and reforestation in reducing soil erosion and increasing vegetation cover. Sustainable land management practices, particularly intercropping and reforestation, have shown significant potential for combating desertification in the Sahel region of Ghana. However, further empirical research is needed to validate these findings. Communities should be supported in adopting sustainable land management practices through capacity building programmes and financial incentives to enhance their effectiveness. The empirical specification follows $Y = \beta_{0+\beta}^{\rightarrow} p\,X + varepsilon$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Sahelian, sustainable, agroforestry, biodiversity, soil conservation, land degradation, ecosystem services*

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