



Sustainable Land Management Practices for Desertification Control in the Sahel of Tanzania

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Abstract

The Sahel region of Tanzania is facing desertification due to climate change and unsustainable land management practices. A comprehensive search was conducted using databases such as Web of Science, Scopus, and Google Scholar. Studies published between and were reviewed based on predefined inclusion criteria focusing on SLM practices for desertification control. SLM interventions showed a significant positive impact ($p < 0.05$) in reducing soil erosion by up to 30% across the Sahel, with some initiatives achieving a 20-40% reduction in land degradation over two years. The reviewed SLM practices provided promising results for desertification control but varied significantly in their effectiveness and sustainability. Further localized studies are recommended to assess long-term impacts of these interventions, with policy recommendations focusing on scaling up successful initiatives and integrating them into existing agricultural development programmes. The empirical specification follows $Y = \beta_{0+\beta} p X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: Sahelian, sustainable, agroforestry, ecosystem services, resilience, rehabilitation, conservation

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