



Climate Change Adaptation Strategies in Sahelian Pastoralist Systems, Mali: A Synthesis of Historical and Contemporary Practices

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Abstract

The Sahelian region of Mali is characterized by its semi-arid climate, which poses significant challenges for pastoralist systems reliant on livestock production and grazing lands. A mixed-methods approach combining qualitative interviews with quantitative data analysis to explore current and past adaptation measures. Traditional grazing patterns show a significant shift towards more dispersed land use across seasons ($p < 0.05$), indicating an adaptive response to changing rainfall patterns. Sahelian pastoralists have developed resilient strategies for climate change, including diversified livestock herds and community-based water management systems. Promote policy interventions that support sustainable land use practices and integrate traditional knowledge into modern agricultural policies. Climate Change, Sahel, Mali, Pastoralism, Adaptation Strategies The empirical specification follows $Y = \beta_{0+\beta}^{-} p X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: Sahelian, Pastoralism, Adaptation Strategies, Climate Change, Livestock Production, Sustainability, Ethnoecology

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