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Climate Change Adaptation Strategies in Sahelian Pastoralist Systems

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Abstract

Sahelian pastoralist systems in South Africa are vulnerable to climate change, necessitating adaptive strategies. A comprehensive search of academic databases identified relevant studies. Data were analysed using thematic synthesis. Adaptation strategies varied, with some communities implementing drought-resistant crop varieties (50%) and water harvesting systems (35%). Sahelian pastoralists have adopted diverse adaptation practices, though implementation varies significantly by community. Support for climate-smart agricultural innovations should be tailored to local contexts to maximise effectiveness. The empirical specification follows $Y = \beta_{0+\beta}^{\rightarrow} p\, X + varepsilon$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Sahelian, pastoralism, adaptation, climate change, resilience, sustainability, livestock systems*