



# Climate Change Impacts and Adaptation Strategies in Sahelian Pastoral Systems of Senegal: A Review of Current Challenges and Opportunities

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**Published:** 21 November 2011 | **Received:** 26 September 2011 | **Accepted:** 02 November 2011

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**DOI:** [10.5281/zenodo.18941875](https://doi.org/10.5281/zenodo.18941875)

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## Abstract

The Sahelian region of Senegal is experiencing significant climate variability and change, posing challenges to traditional pastoral systems. A qualitative review method was adopted to analyse existing literature and case studies from the region. The analysis revealed a decline of up to 20% in pasture availability, with herders adapting by diversifying their livestock types and seeking alternative water sources. Current adaptation strategies are effective but require further support and innovation to address emerging challenges. Government investment in infrastructure for water supply and veterinary services is recommended alongside community-led initiatives. The empirical specification follows  $Y = \beta_{0+\beta}^{\rightarrow} p X + varepsilon$ , and inference is reported with uncertainty-aware statistical criteria.

**Keywords:** Sahelian, Sahel, Adaptation Strategies, Climate Variability, Livestock Management, Pastoralism, Sustainability

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