



Impact Assessment of Community-Based Conservation Programmes on Livestock Health in Maasai Mara Region, Kenya

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Abstract

Community-based conservation programmes have been implemented in various regions to balance wildlife protection with local livelihoods, particularly focusing on livestock health outcomes. A comprehensive search strategy was employed using multiple databases including PubMed, Web of Science, and Google Scholar. Studies were selected based on predefined inclusion criteria focusing on community-based conservation programmes and livestock health outcomes in the Maasai Mara Region between and . The analysis revealed a significant improvement ($p < 0.05$) in vaccination coverage rates for cattle, indicating that community participation significantly enhances disease prevention strategies. Community-based conservation programmes have demonstrated positive impacts on livestock health outcomes through increased awareness and engagement of local communities. Future research should focus on longitudinal studies to assess long-term sustainability and scalability of these programmes. Policy recommendations suggest integrating more educational components into existing programmes to increase community participation. Model estimation used $\hat{\theta} = \operatorname{argmin}\{\theta\} \operatorname{sumiell}(y_i, f\theta(\xi)) + \lambda lVert\theta rVert^2$, with performance evaluated using out-of-sample error.

Keywords: Kenya, Maasai Mara, GIS, Livestock, Epidemiology, Sustainability, Participatory Mapping, Conservation Economics

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