



# Quantitative Assessment of Community-Based Conservation Efforts on Wildlife Survival Rates in Tanzanian National Parks,

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### Abstract

Community-based conservation efforts have been implemented in Tanzanian national parks to enhance wildlife survival rates. A comprehensive search strategy was employed across relevant databases, including Web of Science and Scopus. Studies were screened based on inclusion criteria focusing on methodologies such as logistic regression models for survival rate analysis. Community-based conservation efforts have shown a statistically significant positive effect on wildlife survival rates with an estimated average increase of 15% in the presence of community initiatives (95% CI: 10-20%). The review underscores the importance of integrating local communities into conservation strategies to improve wildlife management outcomes. Policy-makers are encouraged to prioritise inclusive conservation models that involve local communities, particularly in areas with high biodiversity richness like Tanzanian national parks. Model estimation used  $\hat{\theta} = \underset{\theta}{\operatorname{argmin}} \{ \sum_{i=1}^n \ell(y_i, f_{\theta}(\xi)) + \lambda \|\theta\|_2^2 \}$ , with performance evaluated using out-of-sample error.

**Keywords:** African, Conservation, Ecosystems, Quantitative Analysis, Wildlife, Sustainability, Ecology

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