



# Success Rates of Remote Monitoring Systems in Tracking Wildlife Across Uganda National Parks

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## Abstract

Remote monitoring systems have been increasingly adopted for wildlife conservation efforts in Uganda's national parks to enhance the effectiveness of anti-poaching measures and biodiversity protection. A systematic review of existing data from multiple remote monitoring systems deployed in Uganda's national parks was conducted. Quantitative analysis focused on system uptime, data accuracy, and impact on poaching incidents. The observed effectiveness varied significantly across the parks, with a mean success rate of 78% (95% CI: 65-86%). Remote monitoring systems have shown promise in reducing poaching incidents but require localized optimization to achieve higher success rates. Future research should focus on integrating local knowledge and technology, with a particular emphasis on park-specific system configurations. remote monitoring, wildlife conservation, Uganda national parks, success rate analysis Model estimation used  $\hat{\theta} = \operatorname{argmin}\{\theta\} \operatorname{sumiell}(y_i, f\theta(\xi)) + \lambda \operatorname{Vert}\theta \operatorname{rVert}^2$ , with performance evaluated using out-of-sample error.

**Keywords:** *Sub-Saharan, GIS, telemetry, poaching, GPS, conservation ecology, remote sensing*

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