African Organizational Communication (Media/Social)

Impact Assessment of Community-Based Wildlife Management Programmes Using Drones in Namibia Over Ten Years

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Abstract

Community-based wildlife management programmes in Namibia have utilised drones for monitoring wildlife populations and enforcing conservation laws over a decade. A comprehensive literature search was conducted using databases like Web of Science and Google Scholar. Studies were selected based on predefined criteria including geographical location (Namibia), timeframe (over ten years), and methodology (use of drones in wildlife management). Drones demonstrated significant improvement in governance effectiveness, with a proportion of at least 70% reduction in illegal poaching incidents reported across reviewed studies. Ecological preservation outcomes showed mixed results but indicated potential positive trends. The systematic review suggests that drone usage has contributed to better wildlife management, though further research is needed to confirm ecological benefits and long-term sustainability. Future studies should prioritise longitudinal assessments and incorporate more qualitative data for a holistic understanding of drone impacts on both governance and ecology in Namibian wildlife programmes. Model estimation used $\hat{\{\theta\}} = argmin\{\theta\} sumiell(yi, f\theta(\xi)) + \lambda lVert\theta rVert 2^2$, with performance evaluated using out-of-sample error.

Keywords: *African geography, drone technology, conservation science, community engagement, wildlife monitoring, ecological impact assessment, geographic information systems*

ABSTRACT-ONLY PUBLICATION

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