



Success and Challenges of Community-Based Natural Resource Management in Botswana: A Meta-Analysis

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Abstract

Community-based natural resource management (CBNRM) has been implemented in various regions to enhance sustainable use of natural resources and mitigate environmental degradation. A systematic review approach was employed to identify, assess, and synthesize relevant studies published between 2000 and 2020. Studies were selected based on specific inclusion criteria related to CBNRM implementation and outcomes in Botswana. In the reviewed literature, a significant proportion (45%) of CBNRM projects reported positive impacts on biodiversity conservation, with notable reductions in poaching rates by over 70% compared to pre-CBNRM levels. However, challenges such as limited funding and community engagement difficulties were also prevalent. CBNRM initiatives have demonstrated mixed success in Botswana, highlighting the importance of addressing implementation barriers for sustained conservation efforts. Policymakers should allocate adequate resources to support CBNRM projects and develop strategies to improve community participation and financial sustainability. The empirical specification follows $Y = \beta_{0+\beta} X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: African, Botswana, Community-Based Natural Resource Management (CBNRM), Ecosystem Services, Interventions Analysis, Quantitative Synthesis, Sustainability Models

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