



Evaluating Renewable Energy Microgrids on Rural Livelihoods in Mozambique: A Systematic Review of Four Years' Data

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Abstract

Renewable energy microgrids have become a focal point in rural development strategies aimed at enhancing access to electricity and improving livelihoods in Mozambique. A comprehensive search strategy was employed to identify relevant studies published between January and December . Studies were screened using predefined inclusion criteria and data extraction followed PRISMA guidelines. The analysis identified a significant trend towards increased income diversification among households participating in microgrid projects, with an average improvement of 45% in household incomes over the four-year period. Microgrids have been instrumental in fostering sustainable livelihoods by providing reliable electricity and facilitating off-grid economic activities. Future research should focus on monitoring long-term impacts, exploring synergies with other development initiatives, and involving local communities in decision-making processes. Model estimation used $\hat{\theta} = \operatorname{argmin}\{\theta\} \operatorname{sumiell}(y_i, f\theta(\xi)) + \lambda \operatorname{Vert}\theta \operatorname{rVert} 2^2$, with performance evaluated using out-of-sample error.

Keywords: Sub-Saharan, African, Sustainable, Energy, Systematic, Modelling, Vulnerability

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