



Micro-Grids and Solar Cook Stoves: Enhancing Renewable Energy Access in Ethiopian Rural Communities

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Abstract

Renewable energy access in rural Ethiopian communities is limited, particularly for off-grid areas where traditional fossil fuel-based cooking methods are prevalent. A mixed-methods approach combining surveys, focus groups, and interviews to assess community engagement and usage patterns. Solar cook stove adoption was significantly higher among households within micro-grid areas (72%) compared to those without (45%). Renewable energy micro-grids effectively promote solar cook stoves use in rural Ethiopian communities, improving access and reducing reliance on traditional fuels. Integrate renewable energy solutions into broader rural development strategies and continue community engagement initiatives. renewable energy, micro-grid, solar cook stove, off-grid, rural Ethiopia

Keywords: Ethiopia, Micro-grids, Solar cook stoves, Renewable energy, Development studies, Sustainability, Anthropology

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