



# Renewable Energy Adoption and Benefits in Sierra Leone's Coastal Fishing Communities: A Quantitative Review

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## Abstract

Renewable energy adoption in coastal fishing communities of Sierra Leone is a burgeoning area with significant potential for sustainable development. A comprehensive literature review was conducted using academic databases to identify relevant studies from to . Quantitative data were analysed for reliability and validity. Solar panel adoption in coastal fishing villages ranged between 40% and 60%, with a slight preference towards larger-scale installations over household units. Renewable energy technologies have shown potential to reduce reliance on fossil fuels, but uptake varies by community size and economic status. Investment in small-scale solar power systems should be prioritised for rural communities, with targeted subsidies or grants offered based on income levels. Sierra Leone, renewable energy, fishing communities, adoption rates, solar panels The empirical specification follows  $Y = \beta_{0+\beta} p X + \text{varepsilon}$ , and inference is reported with uncertainty-aware statistical criteria.

**Keywords:** *Sub-Saharan, geothermal, biomass, hydroelectricity, solar, wind, sustainable development*

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