



Renewable Energy Technologies in Rural Kenya: An Ethnographic Exploration of Farmer Adoption

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Abstract

Renewable energy technologies are increasingly being promoted to address rural energy needs in Kenya. However, their adoption by livestock farmers remains a challenge. The research employed ethnographic methods including participant observation and semi-structured interviews with livestock farmers and extension agents. Data were analysed using thematic analysis. Farmers expressed significant interest in solar-powered water pumps (80%) and biogas digesters (75%), but faced challenges such as high initial costs and technical difficulties. While there is potential for scaling up renewable energy technology adoption among livestock farmers, overcoming financial barriers and improving technical support are crucial steps. Local governments should provide subsidies or grants to reduce upfront costs. Training programmes on maintenance and operation of technologies should be intensified.

Keywords: *Kenyan, pastoralism, ethnography, community engagement, indigenous knowledge, sustainability, participatory research*

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