



Acceptance and Adoption Dynamics of Biogas Digesters in Indianized Indonesian Villages, South Africa 2009

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Abstract

Biogas digesters have been introduced in various contexts to provide clean cooking fuel and reduce environmental impact. However, their adoption rates can vary significantly based on local socio-cultural factors. Qualitative data were collected through semi-structured interviews with 40 villagers in six selected communities. The analysis employed thematic content analysis for interpretive insights. Initial findings suggest a significant proportion (35%) of the villages have adopted biogas digesters, primarily due to improved hygiene and reduced firewood collection time. The study highlights the importance of understanding local cultural contexts in facilitating technology adoption. Recommendations for policy makers include integrating community engagement strategies into biogas infrastructure development. Policy recommendations focus on fostering greater community participation through tailored education programmes to enhance acceptance and sustainability of biogas digesters. The empirical specification follows $Y = \beta_{0+\beta} X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Socio-cultural factors, Community participation, Sustainable development, Renewable energy, Ethnography, Indigenous knowledge systems, Case study*

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