

Sustainability, Inclusiveness and Governance of Mini-Grids in Africa (SIGMA) Project





ARE MINIGRIDS SOCIALLY INCLUSIVE?

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ABSTRACT

- ♦ Mini-grids play a transformative role in the Global South by providing electricity to marginalized communities, yet their inclusivity often masks underlying socio-economic disparities.
- Through a comprehensive literature review and analysis, this paper reveals gaps in inclusiveness and proposes policy recommendations to enhance minigrids' social impact.
- ♦ Main finding: There is a need for more democratic ownership and governance models for minigrid projects to ensure equitable access and empowerment.

METHODOLOGY

- Keywords for material collection: minigrid, mini grid, offgrid, off grid, decentral, electric, sustainable, inclusi, poverty, gender, productiv, household, Business, enterprise, welfare, supply chain, employment, labour, labor, livelihood, income, energy justice, socio technical
- **♦ Timeframe:** 1988 2022
- Descriptive analysis: Authors, year of publication, journal/publication name, region/ countries, discipline
- ♦ Coding of papers by researchers

Records identified through searching Scopus (n=960 touching on inclusivity in mini grids)

Scopus Records narrowed down to studies on developing countries (n=324)

Records selected following screening of journal, abstracts and title (n=102)

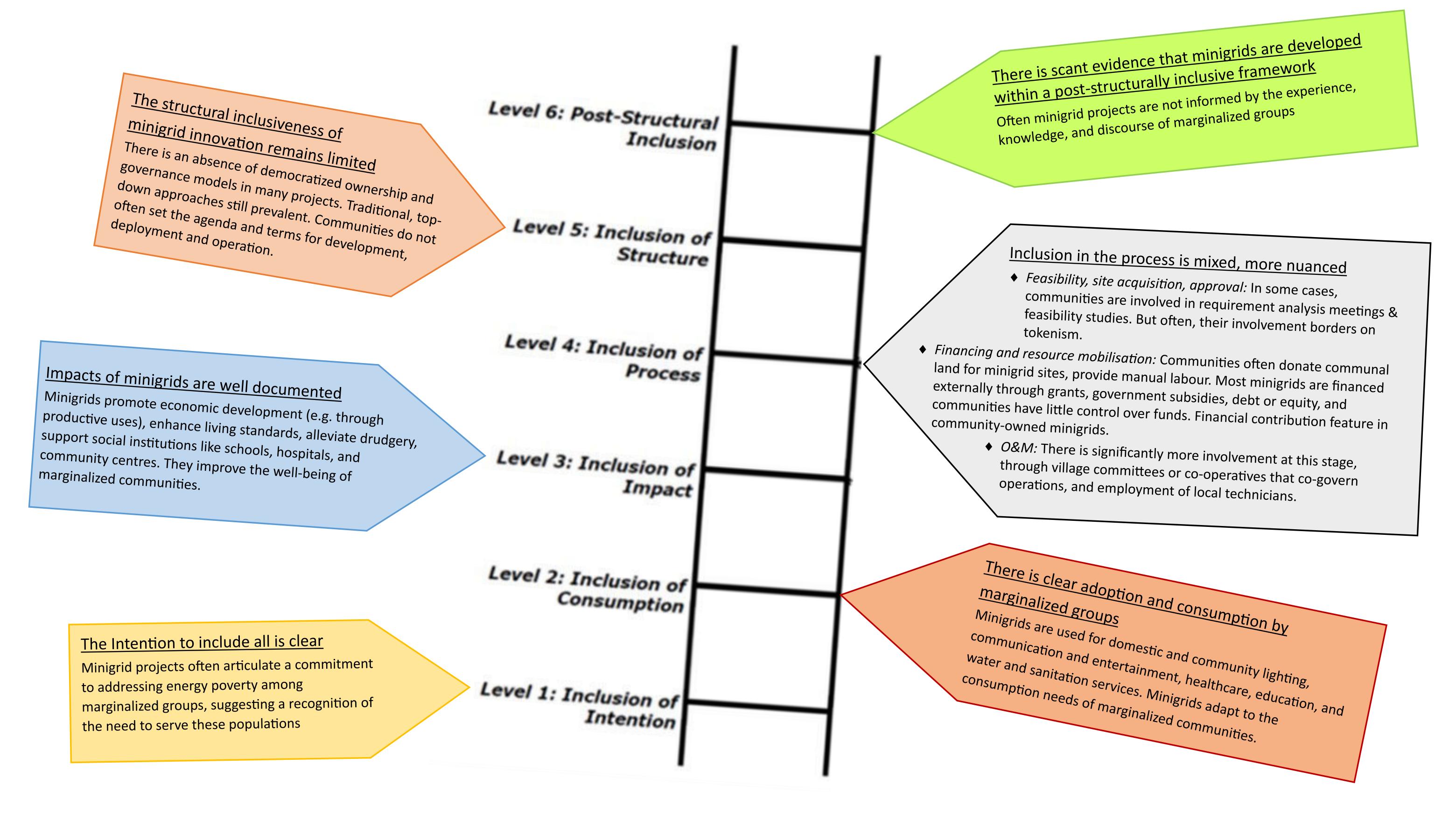
Records included in the review (n = 79)

THEORY

♦ We analyse the literature through the lens of the Ladder of Inclusive Innovation, applying both the market-oriented liberal-individualist stance and equity-centered social-collectivist stance to understand inclusivity

FINDINGS AND DISCUSSION

- ♦ Minigrids demonstrate strong market orientation by providing accessible energy solutions but often fall short in addressing deeper socio-political dimensions of exclusion.
- ♦ While some initiatives show promise in community engagement, overall participation in planning, decision-making, and governance remains limited.
- ♦ Minigrids have yet to fully bridge income and gender disparities within beneficiary communities, often exacerbating existing inequalities.
- Positive impacts on community welfare and economic opportunities are noted, yet the distribution of these benefits is uneven across different societal strata.



CONCLUSION AND RECOMMENDATIONS

- Develop policies that support hybrid financing models, blending public, private, and community resources.
- Foster community ownership models to enhance local engagement and benefit sharing.
- Encourage capacity building and technical training for marginalized groups to ensure equitable participation in minigrid initiatives.
- Explore innovative governance structures that integrate market-driven efficiency with community-based decision-making processes.

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