

EVI-SICEE POLICY BRIEF No. 01
**Determinants of Financing Models for
Business Scalability among Women-Led
Clean Energy Enterprises in Kenya.**

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Key Messages

- **Financing models** are areas for innovation to support scaling up proven clean energy technological innovations, including impact investing, blended finance, mainstreaming climate resilient practices into financial institutions operations. A key role in creating capital affordability and mitigating risk can be played by concessional capital and risk mitigation products, such as from the global development system.
- **Mobile money saves time** and increases the ability of clean energy women entrepreneurs to make transactions and utilize the pay-as-you-go model to purchase clean energy products, as well as means of payment for the end users.
- **Access to debt financing** remains a significant challenge for fast-growing pay-as-you-go clean energy enterprises that rely on asset leasing. Many entrepreneurs cite high customer default rates calling for enhanced Know-Your-Customer mechanisms.
- **MFIs and SACCOs** are financing mechanisms with the potential to support green financial inclusion for small and medium-sized enterprises by aggregating last-mile climate solutions through asset financing, risk-sharing, and turning green portfolios into bankable pipelines.
- **Low bank savings and poor credit ratings** limit the capacity of clean energy women entrepreneurs to secure subsequent funding from financial institutions such as banks. The majority cited their loan applications being rejected.
- **Gender-focused investments** are catalysts for climate-smart growth. The study shows that women are not only consumer of energy but drivers of clean energy innovations in Kenya.
- **Several initiatives, spearheaded by development partners and NGOs**, promote clean energy entrepreneurship in Kisumu County.
- **While women's involvement in clean energy enterprises is notable**, these businesses predominantly function as other sources of income generating activity rather than main source of economic activities. They are largely structured as sole proprietorships and are operated during off-hours, with informal labour support from family members, including children.
- **Clean Energy Enterprises** thrive when paired with business development services and market linkages, allowing them to manage finances better, access capital, and grow sustainably.
- **Favoritism and corruption limit access to government funding driven** by long process and procedure, making it challenging to access these funds.

Introduction

Clean energy is the foundation of a green economy. Micro, Small, and Medium Enterprises (MSMEs) play a vital role in this transformation by providing renewable energy solutions such as clean cooking, heating and cooling systems, solar home systems, mini-grids, energy storage, and other technologies. They also create value through installation, maintenance, and repair services. Globally, MSMEs represent over 90% of businesses and nearly 50% of GDP (IFC, 2017). In Africa, they are powered by the world's youngest and fastest-growing workforce. Yet the financing landscape reveals sharp contrasts between global trends and African realities. The continent faces an acute MSME financing gap of USD 330 billion annually (AfDB, 2022), driven by high interest rates, weak credit infrastructure, limited collateral, and widespread informality. As a result, enterprises remain underfunded, struggling to scale, innovate, or adapt to climate shocks.

The urgency is clear. About 600 million people in Sub-Saharan Africa live without access to electricity, representing 85% of the global deficit (IEA, 2022). Yet the region receives just 2% of global clean energy investment which could further delay achieving universal energy for all (BloombergNEF & SEforALL, 2022). Without urgent action, a green-tech divide will deepen, excluding African communities from the benefits of the energy transition finance. To prevent this, access to finance must be integrated in the climate agenda, driving gender responsive finance with climate ambitions to drive local innovations and real impact. Therefore, investing in green transition should essentially offer co-benefits such as gender equality, decent work, and access to clean energy. Achieving this by involving local communities, particularly women, is critical to converting climate challenges into economic opportunities. With women central role in energy management in households have remained vulnerable to climate impacts that affect their health, time, and livelihoods. However, their ability to drive clean energy enterprises is slowed down by systemic inequalities; limited asset ownership, biases in lending, insufficient grant-based finance to sustainable clean energy businesses. High upfront costs of these clean energy products, compounded by restrictive lending practices and limited technical assistance, further constrain women-led clean energy businesses scale up (ENERGIA, 2019; UN Women & UNDP, 2021). Therefore, economic empowerment is a key pillar for driving just energy transition with particular emphasis on amplifying women's and youth voices and addressing their concerns through effective legislation and adequate financing for gender equality initiatives.

Kenya illustrates both the challenge and the opportunity. Despite advances in financial inclusion through mobile money innovations such as M-Pesa, the financial health clear shows the disparities as the country that still faces an MSME finance gap of USD 19 billion, about 6% of the Sub-Saharan Africa shortfall (FSD Africa, 2024). For women entrepreneurs, they are disproportionately excluded from grants, concessional finance, and venture capital, as they often fail to meet stringent funding requirements for collateral, revenue, and project pipelines.

Nonetheless, Kenya has made strong policy commitments through its Vision 2030 (Government of Kenya, 2007), the Big Four Agenda (Government of Kenya, 2017), the Bottom-Up Economic Transformation Model (Government of Kenya, 2022), and its nationally determined contributions (NDCs) (Ministry of Environment and Forestry, 2020). These frameworks provide an entry point to accelerate the country's transition to a green economy. But achieving this vision requires substantial capital and deliberate efforts to scale financing models that include women.

This study explored how determinants of financing models influence scaling of clean energy enterprises among women in Kisumu County, Kenya. It examined financing mechanisms, financial incentives, and marketing strategies that can expand access to new markets, create jobs, and unlock clean energy solutions at scale.

Findings

Financing Mechanisms

Banks, microfinance institutions, and SACCOs provide flexible funding opportunities, supported by adequate information on available mechanisms. Micro-credit programs have empowered women in the clean energy sector, while digital platforms have opened access to affordable credit.

However, the capacity of women entrepreneurs to scale their enterprises remains constrained by systemic barriers, including:

- Unwillingness of funding agencies to finance women-led clean energy businesses.
- Expensive loans through mobile money platforms.
- High upfront cost for clean energy technologies.
- Due to low levels of financial inclusion, many women do not have bank accounts.
- Minimal funding from investors.
- Lack of credit history and collateral, particularly in rural areas.

These barriers explain why women continue to rely heavily on family donations, retained earnings, and personal savings as their main sources of capital. Most avoid bank loans due to collateral requirements, weak credit histories, and unfavorable interest rates. As a result, their enterprises struggle to grow, reinforcing reliance on internal financing and perpetuating the “missing middle” financing gap.

Financial Incentives

Tax exemptions, grants, research and development support, and government-backed group funding models (like affirmative action funds) can potentially unlock scalability.

Access is hindered by:

- Lack of awareness and information gaps.
- Complex application processes and documentation.
- Low transparency and weak feedback loops.

For instance, one entrepreneur recounted that in her attempt to apply for a World Bank grant: she had to hire external support to complete the application, found the requirements complex, and ultimately never received the funding. The experience left her discouraged, and she has since abandoned efforts to access grant funding. This illustrates how complex procedures and a lack of transparency undermine access to financial incentives.

Marketing Strategies

- Women-led enterprises use digital channels, sales agents, women's groups, customer loyalty through direct sales, transportation support, and interventions from development agencies.
- Development agencies are particularly important, providing incubation, training, and market outreach opportunities that allow women to sell more, hire staff, and sustain their families.
- Social media and digital marketing have empowered women to advertise, receive orders, and expand reach.
- Customers are loyal to clean energy products; they value health benefits, time savings, and reliability.
- Revenues are overall low due to limited consumer awareness, weak demand, and affordability challenges.
- Several entrepreneurs shared real-life constraints:
 - Pay-as-you-go squeeze cash flow, preventing them from paying rent or retaining staff.
 - One had to diversify into selling used electric cooking appliances just to stay afloat.

Recommendations

Mobilize Gender-Responsive and Climate-Smart Financing

- Financial institutions should design gender-responsive, climate-smart lending models that extend beyond asset acquisition to cover working capital, marketing, and distribution.
- Governments and donors should prioritize grants to support research and development of clean energy solutions tailored to women-led MSMEs.
- Financial institutions should reduce access barriers by adopting reforms such as simplified account opening and collateral-free lending, embedding these within national financial inclusion strategies.
- Financial Service Providers need to harness the mobile payments ecosystem in which Kenya is an African leader.
- The government should enhance the implementation of policy innovations such as gender-responsive budgeting, gender targets in NDCs and NAPs, and innovative sovereign instruments to scale gender-just climate action.

Harness Digital and AI Innovation

- Expand open finance and AI-driven credit scoring to extend services to unbanked women entrepreneurs while ensuring financial health.
- Develop responsible regulatory frameworks that protect consumers, ensure fairness, and build trust in digital finance.

Scale Blended Finance and Fair Carbon Markets

- Deploy blended finance mechanisms (first-loss capital, guarantees, concessional instruments) to de-risk investments and crowd in private capital for women-led enterprises.
- Recognize that carbon finance alone is insufficient, and use concessional funding to cover high-risk, early-stage costs until projects can generate carbon revenues.
- Ensure fair pricing of African carbon credits that reflects the true value of local contributions.
- Invest in capacity building and technical assistance for women entrepreneurs across the project lifecycle to ensure participation in high-integrity carbon markets.

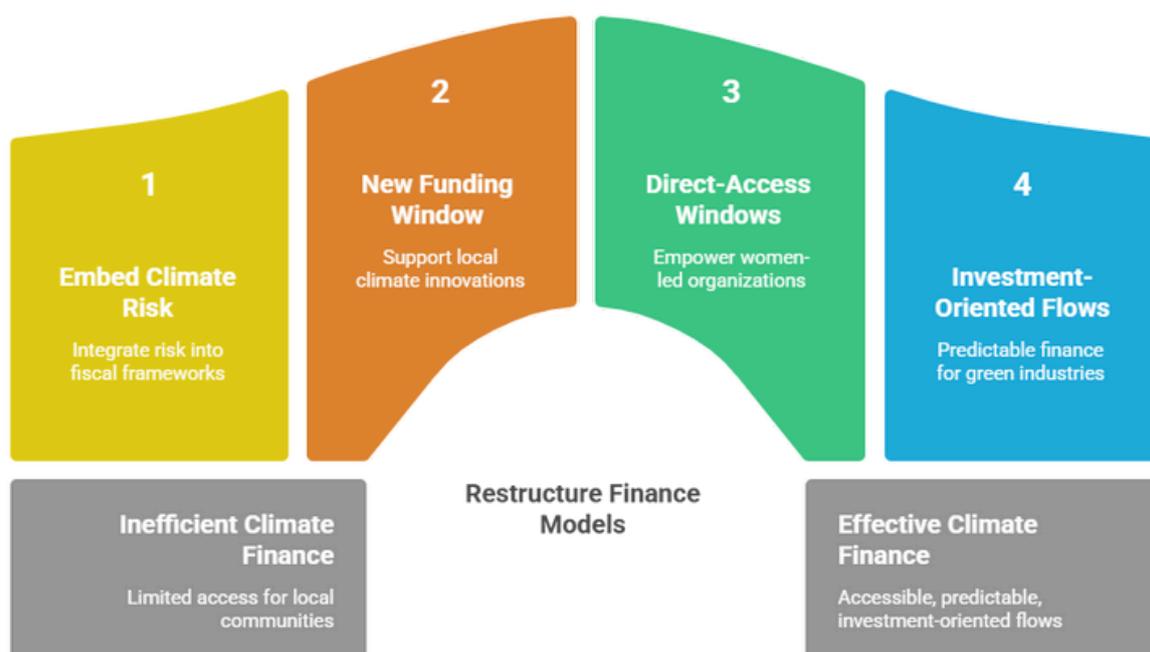
Strengthen Local Financial Ecosystems

- Build the readiness and capacity of civil society organizations, women's groups, and grassroots enterprises to manage climate finance effectively, through credit enhancement.
- Redirect at least 30% of climate finance to locally led solutions, including support for community financial institutions such as SACCOs and VSLAs.
- Introduce participatory budgeting in national climate funds to ensure women's representation in decision-making.

Reform the Global Climate Finance Architecture

- Governments, MDBs, and DFIs should restructure macro-fiscal and debt sustainability models that deliver strong resilience and development co-benefits by embedding climate risk into fiscal and debt frameworks.
- Fiscal pressure in donor countries and geopolitical tensions are constraining traditional concessional finance and grants. This shift calls for new funding window that integrates the needs of local communities driving climate innovations to fully achieve universal energy access for all. Thanks to initiatives driven by World Bank and African Development Bank Mission 300. However, this should not only focus to energy generation but should translates to economic activities that supports livelihood and the well-being of people.
- Develop direct-access windows within Multilateral Development Banks (MDBs) and climate funds to empower women-led and grassroots organizations, rather than channeling most resources through governments and large private actors.
- COP negotiations should aim to push climate finance models that move beyond aid to predictable, accessible, and investment-oriented flows for renewable energy, and green industries. For Africa, platforms such as Africa Climate Summit set the stage for collective bargaining power to drive homegrown solutions and advocate for just fair climate finance.

Reforming Global Climate Finance



Conclusion

This study demonstrates that the scalability of women-led clean energy enterprises in Kenya depends on a convergence of enabling conditions: profitable products, steady sales, access to credit, strong customer and supplier relationships, efficient distribution channels, and an enabling policy environment. When these elements align, women can penetrate new markets, retain skilled staff, and strengthen their business networks.

Yet, multiple structural constraints persist. Many women must rely on personal savings or family support because formal financing remains inaccessible. Financial institutions impose long processing times, collateral requirements, and high interest rates that exclude many entrepreneurs. Promising financial incentives and grants are underutilised due to complexity, opacity, and low awareness. On the market side, weak consumer demand, high transport costs, and information asymmetries suppress revenues, even with creative sales strategies.

These barriers reflect a broader financing ecosystem where digital platforms and self-help groups can offer partial remedies but cannot substitute for systemic reform. As COP30 nears and climate finance gains urgency, now is the moment to act. Without decisive change, the green-tech divide will widen. But with targeted reforms, women can power Africa's just energy transformation and drive inclusive growth.

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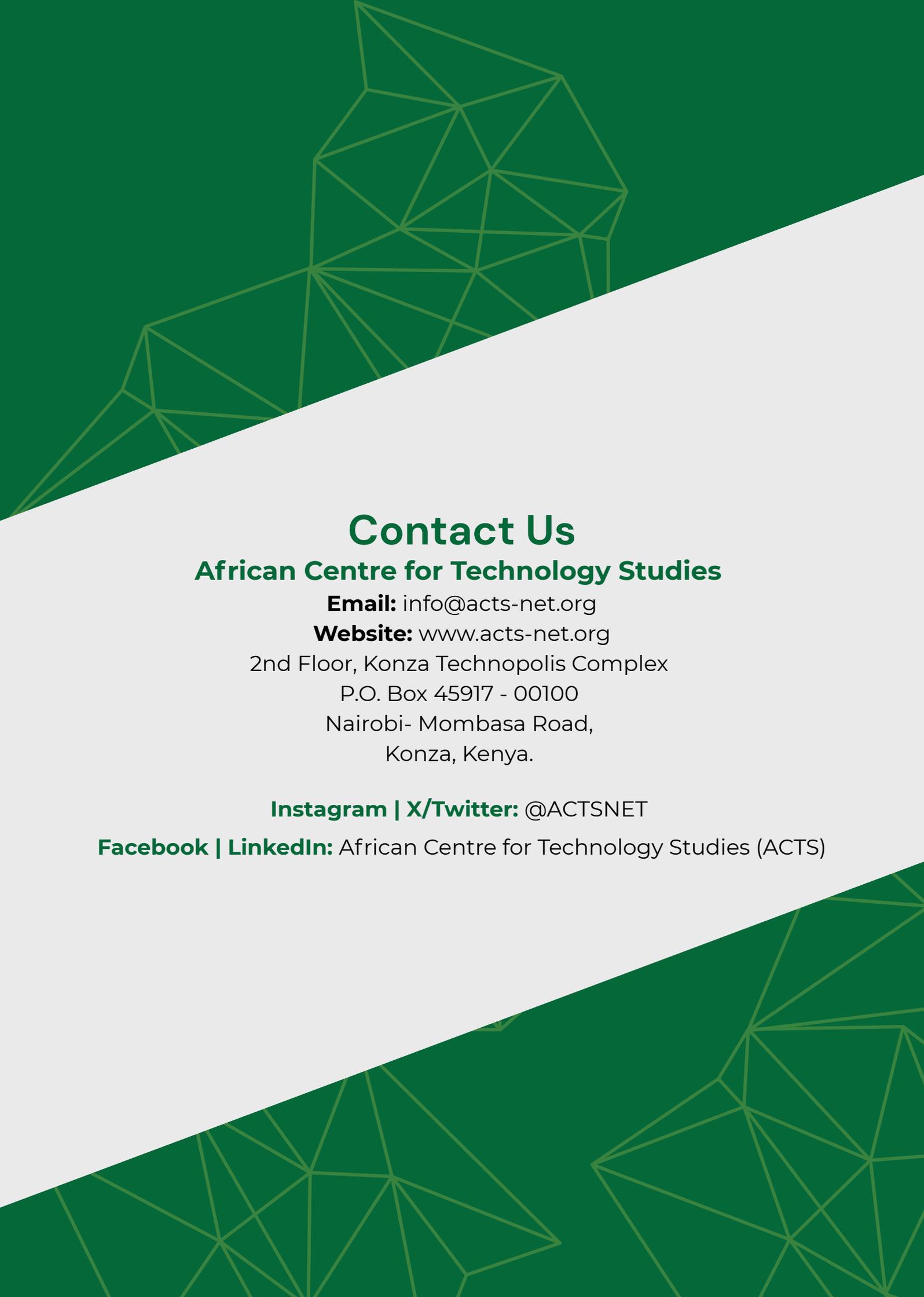
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