The Youth Employment Evidence and Insights Hub

In partnership with mastercard foundation

Climate action and youth employment

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This thematic brief synthesizes key insights on advancing the inclusion of young women and girls in education and green entrepreneurship amid escalating climate pressures in Africa. In climate-vulnerable and resource-constrained contexts, climate-smart solutions are essential for building resilient education-to-work pathways and expanding sustainable livelihood opportunities for green entrepreneurship. However, persistent structural barriers and weak enabling environments continue to limit meaningful participation. The brief also highlights key enablers and the strategic implications for informing policy, programming, and investment decisions that support inclusive green entrepreneurship and dignified work.

Green sectors are increasingly emerging as viable pathways for the economic participation and empowerment of young women and girls. Beyond their global job-creation potential, green economies offer opportunities to advance sustainable and climate-smart interventions that can stimulate investment and entrepreneurship across key green sectors. This brief distils findings across two main areas:

1. The impacts of climate change on learning outcomes and employment prospects,
2. Comparative advantages and enablers for green entrepreneurship in Africa

Climate change, education, and employment pathways

Climate shocks and learning outcomes

- The evidence points to a consistent and robust relationship between climate-related stressors and adverse education outcomes, with significant implications for long-term employment prospects. Floods, droughts, heatwaves, and composite weather shocks disrupt schooling through school closures, damaged infrastructure, food insecurity, and heightened health risks. These disruptions reduce attendance, instructional time, cognitive performance, and progression through education systems (Marin et al., 2024; Randell & Gray, 2019).
- Floods and storms are associated with particularly acute learning disruptions, especially in flood-prone regions where schools are destroyed or temporarily repurposed as emergency shelters. Evidence from Tanzania and Nigeria links flooding to irregular attendance, lower academic performance, and increased psychological distress among learners (Kiberenge & Mbaula, 2023; Anabaraonye et al., 2022). Over the longer term, these shocks are associated with higher dropout rates and earlier transitions into low-quality or precarious work, particularly in agrarian economies where climate variability directly affects household livelihoods (Marchetta et al., 2019).
- Droughts and heatwaves exert slower but equally damaging effects on

educational outcomes. Evidence from Uganda, Kenya, Ethiopia, and Nigeria indicates that rainfall deficits are associated with reduced school attendance, impaired cognitive development, and lower educational attainment. Girls are often disproportionately affected, as climate-induced livelihood shocks increase nutritional stress and household labour demands placed on them (Randell & Gray, 2019; Agamile & Lawson, 2020; Hyland & Russ, 2019). Heat exposure further undermines learning quality and completion rates, particularly in contexts where schools lack adequate infrastructure, ventilation, or reliable access to water (Delprato & Shephard, 2024; Park et al., 2021).

- Across climate stressors, young women and girls face heightened vulnerability. Social norms, unpaid care responsibilities, early marriage, and increased safety risks during displacement compound the effects of climate shocks on education continuity. Panel evidence from 13 LMICs indicated that floods are associated with sharper increases in dropout rates among girls than boys, reflecting gendered household coping strategies that prioritize short-term survival over girls' continued schooling (Jing et al., 2025).
- Despite these patterns, the evidence base remains weakly disaggregated by gender, disability, displacement, and rural-urban location. This gap limits understanding of how intersecting identities shape long-term labour-market trajectories and undermines the design of targeted interventions.

Green entrepreneurship: Comparative advantages and enablers in Africa

Comparative advantages in Africa

In Africa, comparative advantages lie in four critical areas:

- Africa is **resource-abundant** and is rich in raw materials and renewable energy sources (SEforALL, 2023). These natural resource endowments have not been fully harnessed (African Development Bank, 2024).
- **Emerging consumer markets and products** for global supply chains enjoy considerable growth potential (UNCTAD, 2023; UN, 2024).
- With the **world's youngest population**, Africa's growing youth cohort is a major comparative advantage, offering a strong labour force base for inclusive growth, innovation, and entrepreneurship (UN, 2024).
- **Research efforts** are increasingly expanding to understand green entrepreneurship and its contribution to environmental sustainability (Amokomoyen and Abubakar, 2023).

Enabling conditions and emerging pathways

The evidence on enabling factors is informative and highlights several cross-cutting enablers that support green entrepreneurship among women entrepreneurs. Key facilitators include:

- Targeted education and training, including entrepreneurship education, green skills development, and TVET reform (Diradistile, 2021).

- Access to finance, through grants, concessional loans, and tailored youth and women-focused financing mechanisms (Senou & Manda, 2022).
- Mentorship, networks, and incubation, particularly community-based and university-linked hubs (Osabohein et al., 2024).
- Institutional and market support, including enabling policy environments and public procurement.

Indigenous and community-driven initiatives highlight additional pathways, such as agroecology enterprises, renewable energy collectives, waste valorization, and knowledge-based entrepreneurship. These models often combine livelihood generation with community resilience and cultural preservation, but remain under-documented and under-scaled.

Key programmatic and policy insights

1. **Build climate-smart pathways early.** Climate shocks disrupt education and skills development, so inclusion must begin early through resilient schooling, adaptive TVET, and stronger school-to-work transitions for young women.
2. **Climate-smart education and financial inclusion are critical enablers of green livelihoods.** Expanding resilient education-to-work pathways and strengthening access to savings, credit, insurance, and digital finance can accelerate young women's participation in green jobs and entrepreneurship, while supporting resilience to climate shocks.
3. **Financial inclusion is a critical enabler of climate resilience and green livelihoods.** Access to savings, credit, insurance, and digital finance helps women and youth manage climate risk and invest in green enterprises.
4. **Africa's green economy potential is underpinned by strong comparative advantages.**
   Africa is resource-abundant, with significant renewable energy potential and raw material endowments that remain underutilised, alongside expanding consumer markets and a relatively young population as a labour force.