Republic of Kenya
Ministry of Education
State Department for TVET

Kenya School of TVET

The Home of Technical Education

Green skills for the green Africa's future:

where we are

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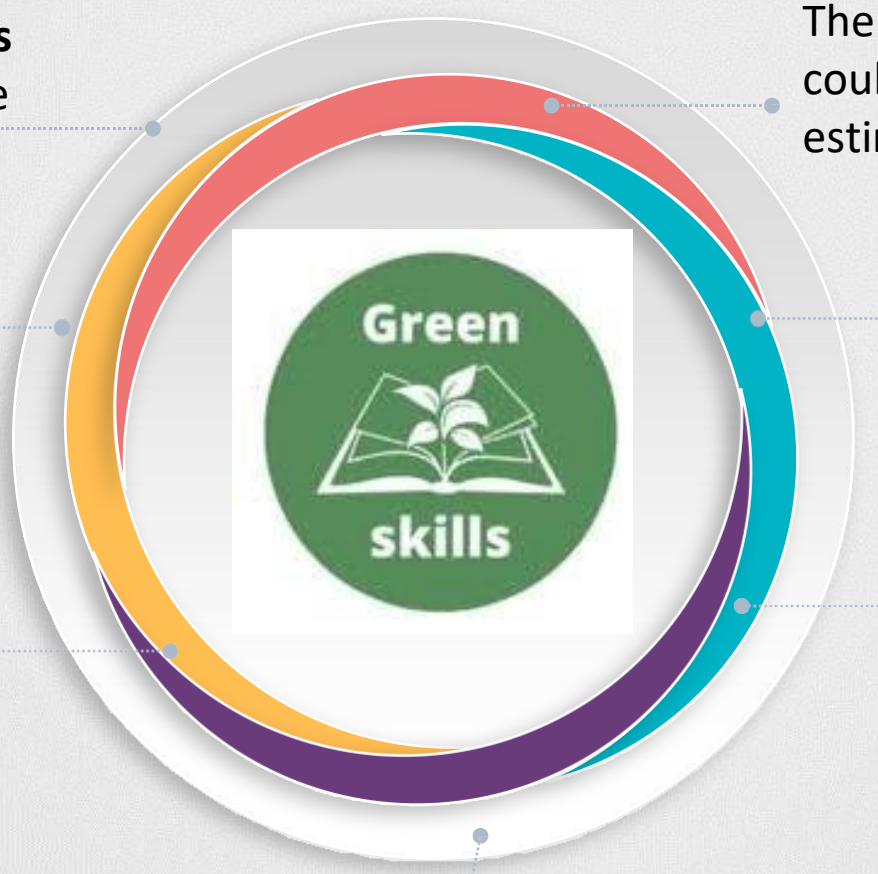
Workforce and demographics– Why green skills matter for Africa - UNESCO+10Scribd+10atlas.unevoc.unesco.org+10.,atlas.unevoc.unesco.org+1Reuters+1 Nov, 2024

Africa holds **60% of the world's arable land** and vast renewable energy potential

Only **38 countries** have member-level labour-market information systems that support green skills tracking

Youth make up **60%+ of Africa's population** – a demographic dividend waiting to be empowered



The **green and circular economy** could create **millions of new jobs** (ILO estimate: **24** million globally by 2030).

30–40% of African countries are integrating green/digital skills into national strategies—but implementation quality varies widely

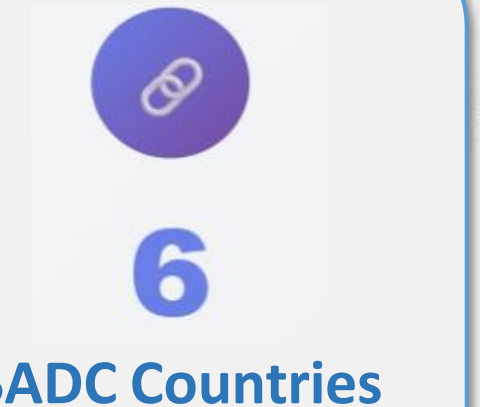
Green skills are **key enablers** for achieving the **SDGs, Agenda 2063**, and national climate goals.

Ghana stands out with its **2021–2025 strategy framework** and labor-market observatory to forecast green skill needs

OECD

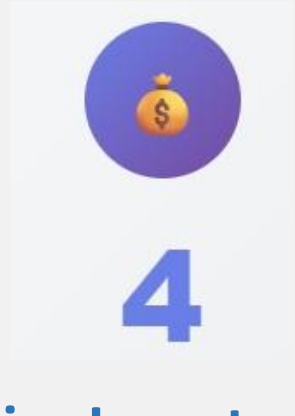
More stats…

Only **20% of African TVET institutions** conduct national skills forecasting related to low-carbon economics.



SADC Countries

Studies in six SADC countries found **little planning, coordination, or focus** on regional grid integration and energy within TVET.



Major Investment Barriers

TVET investment hampered by **limited budgets, poor infrastructure, low staff capacity,** and fast youth base.

About 70**% of TVET trainers** have no current industry experience, signifying weak private sector connections.

Green Skills Readiness

Current Skills Gap

Critical Skills Shortage

Companies like **Husk Power in Nigeria** report a lack of basic electrical, civil, and mechanical skills – even before green-specific competencies are factored in

Major gap in foundational technical skills across the continent

Education Requirements

10 %
University Degrees

30%
TVET Training

Only **10% of future green** roles will require university degrees, while **30% will need TVET-level** or certified technical training

Green Jobs Projection by 2030

70%
Renewable Energy
Majority of opportunities in clean energy sector

1.7M
Solar Energy
Specific roles in solar power development

60%
Skilled/White Collar
Technical and professional positions

2030
Target Year
Timeline for green transformation

Guiding Vision - African Continental TVET Strategy 2025 - 2034

Integrating Green Skills into TVET Across Africa

- **Environmental Sustainability Integration**
  Embedding sustainability principles directly into **TVET curricu**la across all programs
- **Modular Competency-Based Programs**
  Flexible, skills-focused training with integrated green competencies
- **Strengthened Partnerships**
  Building centres of excellence and collaborative networks for sustainable TVET
- **Market Responsiveness**
  Aligning training programs with emerging green labour market demands

Youth

Women

Refugees

Ensuring equitable access to green skills training for all vulnerable and underrepresented groups across the continent

Examples of community led/institutional based entrepreneurial solutions

Donor- and government-supported green skills initiatives (e.g., AU's Skills Initiative for Africa)

Rise of **eco-entrepreneurship hubs**, innovation labs, and youth-led green start-ups.

Growing number of TVET & higher education programs integrating sustainability

Support mechanisms: Access to microfinance, incubation hubs, and public procurement incentives are key enablers.

Uganda: Eco Brixs transforms plastic waste into construction materials, led by local entrepreneurs

Kenya: M-KOPA enables off-grid solar access through pay-as-you-go models, empowering rural households

- Solar energy training
- Climate-smart agriculture
- Waste management
- Water conservation

Green TVET Initiatives in Kenya

Solar Energy Training

Comprehensive solar technician certification programs building expertise in renewable energy installation and maintenance

Climate-Smart Agriculture

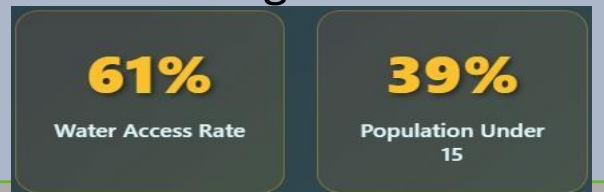
Advanced training in sustainable farming practices, drought-resistant crops, and precision agriculture technologies

Waste Management

Specialized programs in recycling technologies, circular economy principles, and sustainable waste processing

Water Conservation

Technical training in water harvesting, purification systems, and sustainable water resource management



Challenges and opportunities in education & training

Key Challenges

Policy Misalignment

Lack of policy alignment between education and climate strategies.

Missing Frameworks

Absence of green skills frameworks and assessment standards.

Pedagogical Inertia

Rote learning over competency-based approaches.

Resource Scarcity

Limited resources for TVET institutions and outdated infrastructure.

Communication Gaps

Weak communication between green TVET and technical experts.

Opportunities

Experiential Learning

Introduce interdisciplinary, experiential learning.

Leverage Digital Tools

Leverage digital tools, simulations, and micro-credentials.

Strong Partnerships

Strengthen public-private partnerships for curriculum co-creation.

Teacher Upskilling

Invest in teacher upskilling and industry exposure.

Labor Market Systems

Develop robust labor-market information systems for green jobs.

The way forward – Transforming education for green transitions

Integrate Sustainability

Infuse sustainability across all curricula—not just in green career paths—from primary to tertiary education.

Upskill Educators

Promote teacher upskilling in green literacy, climate pedagogy, and practical applications of green technologies.

Certify Pathways

Develop clear green skills assessment and certification pathways, including recognition of prior informal learning.

Foster Collaboration

Encourage peer learning, South-South collaboration, and localized innovations to share best practices and resources

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Thank you