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Country Profile: Green Skills and TVET in Ghana

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Introduction

Despite Ghana having, in comparison to other countries in the region, a stable democracy and above-average economic growth, the economy remains defined by low-skilled, low-paid jobs, making it challenging for youth to access decent employment opportunities (UNESCO-UNEVOC, 2024a). In 2021, around 11 per cent of Ghana's population were living on less than USD 1.90 per day, with over 90 per cent of the working population being employed in the informal sector. There is a shortage of skilled workers that are needed to secure industrial productivity and competitiveness, especially in emerging sectors such as the green economy and Industry 4.0.

There are challenges with attracting youth towards TVET routes and supporting their successful transition to work. Around 28 per cent of Ghanaians aged 15–34 are not in employment, education, or training, with women only making up 25 per cent of TVET enrolments and additional female underrepresentation in technical and craft occupations (UNESCO-UNEVOC, 2024a). This speaks to a need to promote the TVET route to secondary school graduates, employers, and marginalised communities. TVET in Ghana has been traditionally delivered informally in MSME/SMEs by master craftpersons utilising informal apprenticeship models.[1] This informal approach to developing skills is becoming increasingly outdated as SMEs face challenges in keeping pace with technological innovations, including in responding to the green transition, demanding more structured formal training routes. Additionally, skills acquired through traditional apprenticeships limit youth advancement within the formal education system and transferability between jobs.

The government, in consultation with development partners, has sought to harmonise TVET system governance and introduce enhanced dual TVET partnerships between industry and training providers that embed CBT models and meet the skills needs of a modern economy. Despite these interventions, the effectiveness of Ghana's TVET system remains limited in terms of policy and institutional management, teaching quality and relevance, access and inclusion (UNESCO-UNEVOC, 2024a).

TVET policies

In 2019, the government of Ghana initiated the Harmonisation of TVET reform, which has seen all 218 TVET Providers, which were previously spread over 19 different ministries, organised under the umbrella of the Ministry of Education.[2] Two key TVET agencies were established: CTVET, responsible for developing TVET sector policy, and TVETS, responsible for sector research and implementing TVET policy.

1. For more information, please see https://www.giz.de/en/regions/africa/ghana/news/equipping-thousands-employability-skills-ghana-tvet-voucher-programme.

2. For more information, please see https://www.govet.international/en/181078.php.

The development of Ghanaian TVET system reform is being further supported by the EU-Ghana Pact for Skills: Support to the Transformation of the TVET System project, a three-year intervention launched in 2023 with a EUR 16 million (USD 18.66 million) budget funded by the EU and German government (BMZ). The project, implemented by GIZ, includes a focus on developing TVET system and policy capacity to align with market needs through introducing concepts of dual TVET and CBT. The project is aligned to national policies including the National Green Jobs Strategy, the Education Strategic Plan (2018–30), the Education Sector Medium Term Development Plan (2022–26), and the Strategic Plan for TVET Transformation (2023–27) (ILO, 2024c).[3]

Governance and stakeholders

Under the Harmonisation of TVET process, the **Ministry of Education** has institutional responsibility for overseeing the TVET system and key government agencies.[4]

CTVET is a Ministry of Education agency responsible for responsive TVET policy, governance structures, systems and procedures. CTVET acts as a coordinating body for TVET Providers and polytechnics with the mandate to plan, coordinate, and support all aspects TVET system delivery.[5]

The Ghana TVETS is the implementing agency for CTVET policies and programmes the management of sector quality assurance, and curriculum development.[6]

Green skills policies

The National Green Jobs Strategy (2021–25), delivered under MELR, with support from MESTI, in collaboration with the ILO, provides a framework for the promotion of green jobs in Ghana (Ministry of Employment and Labour Relations, 2021). The strategy promotes Ghana's green jobs and skills funding through identifying opportunities to access private sector and international investment. Positive gender, equity, and social inclusion (GESI) outcomes are reinforced through from strategic input from the Ministry of Gender, Children and Social Protection and the National Youth Authority.[7] The strategy's overall goal is to create decent green jobs in Ghana through the delivery of four components; developing MELR's capacity to coordinate green job initiatives; developing skills for the green economy; Green Enterprise Development; and the mobilisation of green sector funding.

The ILO Ghana Green Jobs Programme (2024–27) provides a framework for the promotion of green jobs in Ghana, and the identification of skills needs and the development of a relevant curriculum. The programme is linked to key national policies including, the National Green Jobs Strategy, the Education Strategic Plan (2018–30), the Education Sector Medium-Term Development Plan (2022–26), and the Strategic Plan for TVET Transformation (2023–27) (ILO, 2024c). Through the Green Jobs Programme, the ILO promotes coordination on green jobs and skills projects to develop green and digital jobs and reinforces capacity to address green and digital skills gaps and build the relevance and accessibility of competency-based TVET programmes that respond to current and future labour market needs (ILO, 2024c).

Examples of good practice

Pact for Skills: Support to the Transformation of the TVET System in Ghana project (GIZ)

Pact for Skills, which is being implemented by GIZ, addresses identified challenges for youth unemployment, coupled with low-skilled and low-paid work. The project promotes employer engagement and the introduction of dual training modules, capacity development of TVET instructors and workforce facilitators, and TVET modernisation. The introduction of green education and digital transformation skills are key Pact for Skills objectives. The project has introduced green programmes, utilising a CBT curriculum and dual TVET models, for Building Construction and Biodigester Construction, in partnership with six Ghanaian technical institutes. The project supports learners' access to quality WBL through the provision of insurance, stipends, support for travel and accommodation costs, and personal protective equipment. The two courses have registered 720 learners (505 in Building Construction and 215 in Biodigester Construction) over three academic years across the participating institutions. So far, 476 learners (339 male, 137 female) have participated in the programmes' WBL (described as workplace experience learning [WEL] in Ghana) element. There have been 282 graduates with the skills to contribute to the greening of the Ghanaian economy.[8]

The project's objectives are to train 3,200 persons through competence-based training, including digital and sustainability aspects, as well as 2,400 in-company trainers, including at least 700 women. Two hundred

3. For more information, please see https://aspyee.org/news/eu-ghana-pact-targets-green-jobs-and-skills-devt.
4. For more information, please see https://moe.gov.gh/the-technical-vocational-and-skill-training/.
5. For more information, please see https://ctvet.gov.gh/.
6. For more information, please see https://gtvets.gov.gh/.
7. For more information, please see https://gna.org.gh/2023/09/national-green-jobs-strategy-identifies-major-sectors-for-green-jobs-advancement/.
8. For more information, please see https://www.giz.de/en/projects/supporting-transformation-vocational-education-and-training-ghana.

companies are accredited by CTVET to offer WEL as part of CBT; three TVET schools in three regions are accredited/registered by CTVET as providers of green competence-based vocational training; and 10 new or adapted competency-based curricula for training in green sectors are accredited by CTVET.

The project promotes employer engagement and the introduction of dual training modules, capacity development of TVET instructors and workforce facilitators, and TVET sector modernisation in alignment with industry needs. The programme is being delivered in partnership with six selected Ghanaian TVET institutes. The Building Construction and Biodigester Construction programmes include modules that introduce German language and specific sector skills requirements, to prepare graduates for potential progression to in-country, German-based apprenticeships.

Global Skill Partnership (2023–27) between Germany, Ghana, and Senegal

Funded by the EU and delivered by GIZ, the project has a budget of EUR 4.3 million, with 90 per cent being funded through the EU's Asylum, Migration, and Integration Fund The project supports the creation of skills development programmes tailored to address country-specific high-demand occupations. This includes the development of comparative curricula and training, which will equip teachers and stakeholders to apply procedures, methodologies, and knowledge that resonate in each local context. Up to 360 Senegalese and Ghanaian participants will receive training and develop their skills in training programmes aimed at domestic job opportunities. While selected trainees will continue their apprenticeship in Germany, those who remain in their home country will receive comprehensive additional technical training, so that they will have the necessary skills to pursue their professional goals. Through the application of digital profiling methods. One hundred and eighty participants will join the "abroad" track and will be part of the mobility for the continuation of their training in Germany. Predeparture and orientation measures and language training will be applied to assist participants on the mobility scheme, supporting their enrolment onto a German apprenticeship programme. Preliminary results from March 2025 were encouraging, with 22 of 24 Senegalese and 19 of 20 Ghanaian participants passing the A2 German language exam.[9]

Investment Ready TVET Providers

Volta River Authority Academy (Ghana)

VRA Academy is integrated into the Volta River Authority, through which is receives funding and planning oversight. VRA Academy trains Ghanaian and wider African energy sector technicians, engineers, and managers through competency-based engineering and non-engineering courses. VRA Academy delivers competency-based training (CBT) programmes for around 3,000 trainees a year (approximately 2,500 internal trainees drawn from the Volta River Academy workforce and 500 external enrolments). VRA Academy offers modular bespoke courses ranging from 5 days to two years, with the majority being delivered in around 5 to 10 days. The courses combine practical and theoretical elements and are delivered in an industry-aligned training centre. Training includes a growing focus on green skills through hydro, thermal, and solar power courses. Programmes are mapped to the Ghanian National Qualification Framework (GNQF). VRA Academy is in the process of securing accreditation for some selected programmes from the Commission for Technical Vocational Education and Training (CTVET).

VRA Academy is a member of ANCEE, under the Association of Power Utilities in Africa (APUA), and has been selected as one of the five regional Centers of Excellence (COEs) for the West African Power Pool (WAPP).[10] WAPP works across multiple African countries to implement best practices in international integrated power systems operations and management. VRA Academy works through its international networks to deliver training and capacity development support to African partners, including plans to deliver 30 courses in the next year to cohorts from Malawi, Zimbabwe, Angola, and Eswatini.

Programme areas. Aimed at developing the competencies of both technical and nontechnical staff within the energy sector. This includes a range of sector-specific training; generation programmes

9. For more information, please see https://www.migrationpartnershipfacility.eu/mpf-projects/52-skills-partnerships-between-senegal-ghana-and-germany/preview.

10. For more information, please see https://usea.org/regional-partnerships/west-african-power-pool-wapp.

generation programmes, such as power networks, power networks and substation maintenance; renewable energy integration; and nontechnical courses in energy management and leadership, and IT.[11]

Scale and duration of programmes. Modular bespoke courses ranging from 5 days to two years, with the majority being delivered in around 5 to 10 days to current sector professionals.

Governance and links to industry. VRA Academy is integrated into the Volta River Authority with programmes directly aligned to industry skills needs. VRA Academy programmes include workplace elements, developing professional self-awareness, opportunities to apply the knowledge and the skills in a practice-based setting, and internships.

Programme outcomes. Training targeted at existing Volta River Authority or partners employees looking to upskill or reskill through occupation-specific training, embedding direct links between training and employment.

Investment needs. VRA Academy has a budgeted business plan, developed in consultation with the Volta River Authority; however, it would welcome the opportunities afforded by additional loans or grants. They noted that investment could be delivered through a match funding model with the Volta River Authority. A priority investment is for support to acquire training simulators to replicate power station and renewable energy employment working conditions, which can be challenging, and in some cases dangerous, for trainees to access through work-based learning (WBL).[12] They highlighted the importance of train the trainer interventions aligned with the provision of new training resources and emerging global training techniques. This includes through equipping new training rooms, campus infrastructure, and training resources. Finally, the academy would value international collaboration in the development of a curriculum, especially for emerging green technologies and jobs.

Electro Recycling Ghana (Ghana)

ERC is a German-Ghanaian partnership introducing innovative models for skills training and start-up support for the green economy.[13] ERC utilises the demand for affordable electronics by delivering training programmes to develop skills in testing, repairing, and reusing old electrical appliances. Training, developed collaboratively with German partners, focuses on skills required for services in e-waste recycling, plastic recycling, battery management, and data destruction. ERC also supports start-ups through introductions to a cohort of international investors ready to provide seed funding for sales booths to young entrepreneurs. The booths have provided platforms for over 200 youth to sell tablets, phones, and laptops produced through ERC's recycling activities and other products, such as recycled EV batteries and data packages (in high demand in Ghana).

Programme areas. In-house training programme for testing, repairing, and reusing old electrical appliance to support the delivery of services in e-waste recycling, plastic recycling, battery management, and data destructions. Utilising recycled resources to support youth start-ups selling equipment and data packages.

Scale and duration of programmes. Short courses: four to six weeks.

Governance and links to industry. Joint investment between German and Ghanaian partners developing electronic goods recycling to develop products that can be sold to the market through sales booths for young entrepreneurs, funded through investors.

11. For more information, please see https://www.vra.com/media/2018/2019 percent20VRA percent20Academy percent20Training percent20Brochure.pdf.
12. UNESCO-UNEVOC define work-based learning as: *"Work-based learning refers to all forms of learning that takes place in a real work environment. It provides individuals with the skills needed to obtain and keep jobs and progress in their professional development. Apprenticeships, internships/traineeships and on-the-job training are the most common types of work-based learning."* For more information, please see: https://unevoc.unesco.org/home/+TVETipedia+Glossary/lang=en/show=term/lang=en/term=Work-based+learning.
13. For more information, please see https://www.electro-recycling.com/.

Programme outcomes. Fifty trained employers and 200 youth start-up booths. ERC did not share the exact figure on the sustainability of the booths but indicated that it had been a successful model that they are planning to extend.

Investment needs. ERC faces challenges with its training centre infrastructure, which has faced challenges with flooding. Investment in the centre would allow ERC to grow the number of trainees and the quality of training. ERC also requires access to training resources that align with modern recycling/circular economy practice. The centre would also welcome the opportunity to access global training programmes and train the trainer input. The current investment model, working with youth to establish booths, could be further extended through additional investment and access to products.