

**By Politeknika Txorierri, Apodissi, APRO, Don Bosco, Harare Institute of Public Health, Asociación Mundus, Simukai**

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## SUSTAIN-IT: Application of Digital Tools in TVET Programme for Environmental Monitoring to support Climate Mitigation and Empower Youths in Africa

**The European Commission granted funding to SUSTAIN-IT, a three-year Erasmus+ project co-funded by the European Commission that will take place from 2025 to 2027. SUSTAIN-IT will raise sustainable awareness of Technical Vocational Education and Training (TVET) teachers and students on the application of digital tools to observe, analyse and monitor the environment with a focus on solar energy, air and water quality, for climate mitigation efforts and aligns with the United Nations Sustainable Development Goals (SDGs).**

The SUSTAIN-IT project is implemented by a consortium consisting of three European partners: Politeknika Txorierri, Asociación Mundus (Spain), and APRO Formazione (Italy). Four partners from Africa: Don Bosco Provincialat (Rwanda), Harare Institute of Public Health (HIPH), Simukai Vocational Skills Training Hub (Zimbabwe), and Apodissi (Namibia).

Together, these partners will promote the adoption of digital tools such as the Internet of Things (IoT), Sensor Technologies and Arduino dashboard to develop comprehensive modules that will support the pedagogical upskilling of TVET teachers and students in environmental monitoring analysis.

### **SUSTAIN-IT TVET Schools from Rwanda, Zimbabwe and Namibia**

The partners will collaborate to leverage the comparative report developed by the TVET schools in collaboration with all the SUSTAIN-IT partners to adopt and foster a knowledge exchange e-Toolbox for the implementation of Environmental education and raising awareness in TVET classrooms built on the application of the Challenge-Based Learning pedagogical methodology, to promote social entrepreneurship for youth action about Inclusive teaching in TVET programmes.

### **Use Cases and Massive Open Online Course (MOOC)**

The SUSTAIN-IT partners will create MOOC content developed for capacity building of TVET educators on the application of digital tools in the classroom and raise awareness. The content will be organised into short, and easy topics covering;

- Educating via data-driven STEM
- Leveraging technology for green advancements and sustainable practices
- IoT for environmental monitoring and functionality
- Basics of Arduino programming
- Sensors for environmental monitoring (solar energy, air quality, water quality)
- Data visualisation
- Data analysis
- Applied knowledge of e-Toolbox (WP2) in the digital and sustainable era

Upon completing the MOOC, teachers will receive accreditation through Open Badges issued by the consortium.

Following the MOOC, three use cases will be developed to raise environmental awareness through experiential learning. The SUSTAIN-IT partners will organise a National Training Webinar to train African TVET teachers for ready-to-use challenges for ecological monitoring in TVET supported for hardware, software, and reference materials.

- Solar energy: To measure the energy produced in voltage (v)
- Air Quality: To observe pollution, comfort, and greenhouse effects.
- Water Quality: To examine Ph, Dissolved O<sub>2</sub>, turbidity, conductivity, and temperature.

### **Online Knowledge Exchange Platform**

In 2026, SUSTAIN-IT will launch its training modules on the Smart Step eLearning platform as a free, open-source resource for TVET schools and students across Sub-Saharan Africa and the broader continent. The multilingual platform is designed to be accessible and features a range of tools, including job listings for open opportunities. Regardless of location, users can click the link to [Join the Smart Step platform](#) to engage

in peer-to-peer learning, participate in mentoring sessions with instructors, attend online classes, and connect with a global community of 1,969 members, spanning over 48 countries.

The SUSTAIN-IT project aligns with European priorities for collaboration with Africa and supports the dual transition to a green and digital economy. By equipping African TVET centres with digitally advanced educational resources, SUSTAIN-IT fosters innovation while promoting environmental sustainability through enhanced monitoring and observation, contributing to a greener future.

The project's partners:



For more information on the Sustain-IT project please see **[sustain-it-project.eu](http://sustain-it-project.eu)**

For media enquiries: **[info@sustain-it-project.eu](mailto:info@sustain-it-project.eu)**

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